PROJECT NUMBER: 2105
PROJECT TITLE: Filter Development
PROJECT LEADER: W. A. Nichols
PERIOD COVERED: October, 1987

I. FILTER MATERIALS, LTD.

A. **Objective**: Develop polypropylene tow that is equivalent to cellulose acetate.

B. **Results**: OC Panel testing conducted on MUL models with a CA filter vs. a FML filter with wax and triacetin indicated no significant difference in the models on all attributes tested. Sample FML filters have been made with triacetin and wax for MC Panel testing and two Mapping Tests. The smoke chemistry of these cigarettes will be analyzed.

Fiber fusion, experienced on the KDF-2 at high speed, has been reduced by the injection of compressed air at the compression tongue.

Sample mentholated cigarettes were produced with FML filters to determine menthol transfer efficiency. Previous testing had indicated a low transfer efficiency which could not be explained.

C. **Plans**: Various filter additives will be tested for effects on smoke chemistry. Variability in filter weight will be determined on tow produced with a new crimper design.

II. MENTHOL APPLICATION

A. **Objective**: Provide support for the introduction of menthol on foil.

B. **Results**: Various samples have been produced to support product and process introductions. Mentholated foil was produced for product testing in Spain. To qualify additional menthol suppliers, samples were produced with menthol from three suppliers. Tests are being conducted to determine the subjective and processing effects of foil oil. Processing with foil oil applied to the mentholated foil improved packer speed. Alcan foil was tested and qualified for machinability.

C. **Plans**: Mentholated foil samples for each of the small brands will be produced. Sample cigarettes will be produced in the factories and subjectively tested. POL testing will be scheduled for the larger menthol brands.

III. NEW FILTER CONCEPTS

A. **Objective**: Develop unique products using novel filters.

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B. **Results**:
Tube-in-Tow Filter: Tube-in-tow filters targeted for 4mg and 6 mg tar deliveries did not achieve target. Samples are being resubmitted to analytical with modified dilution.

Concentric Filters: Focus Group testing of concentric filters is in progress. Results will be available in November. Sample mentholated cigarettes were produced with blue core concentric filters for OC Panel testing. Black core concentric filters with charcoal have been received from Filtrona and will be combined in the factory.

Optional Smoking Device: Focus Group testing of menthol and regular versions of the optional smoking device is in progress. Results will be available in November.

C. **Plans**: Samples of the Modified Plastic Filter will be produced to the two required specifications. OC Panel testing of the blue core concentric filters will be scheduled.

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